

Product datasheet for **RG208648**

METT10D (METTL16) (NM_024086) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	METT10D (METTL16) (NM_024086) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	METT10D
Synonyms:	METT10D
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG208648 representing NM_024086
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTCTGAGTAAATCAATGCATGCAAGAAATAGATACAAGGACAAACCTCCTGACTTTGCATATCTGG
 CATCCAAATATCCAGATTTTAAGCAGCATGTTTCAGATAAATCTGAATGGAAGAGTGAGCCTTAATTTTAA
 AGACCCCGAAGCAGTCAGAGCTCTGACGTGACTCTCCTAAGGGAAGATTTGGACTTTCTATTGATATT
 CCATTGGAGAGACTAATCCACAGTTCCTTGAGACTCAACTATATTCCTGGGTAGAAGATCTGATCG
 GTCACCAGGATTCTGACAAAAGTACTCTCGAAGAGGAATTGACATAGGCACGGGGGCATCTTGCATCTA
 CCCCTTACTTGGAGCAACCTTGAATGGCTGGTATTTCTCGCAACAGAAGTGGATGATATGTGTTTCAAC
 TATGCAAAGAAAAATGTGGAACAGAATAACTTATCTGATCTCATAAAAAGTGGTAAAAGTGCCACAGAAGA
 CACTCCTGATGGATGCTCTTAAAGAAGAATCTGAGATAATCTATGACTTTTGCATGTGCAACCTCCCTT
 TTTTGCCAATCAATTGGAAGCCAAGGGAGTAAACTCACGAAATCCTCGAAGACCTCCGCCTAGTTCTGTT
 AATACAGGAGGCATCACAGAGATCATGGCAGAAGGAGGTGAATTAGAGTTTGTAAAAGGATCATCCATG
 ACAGTCTACAACATAAAAAAGATTAAGATGGTATAGCTGCATGCTGGGAAAAGAAATGCAGCCTGGCGCC
 TCTGAAGGAGGAGCTTCGCATACAAGGGGTTCCCAAAGTAACGTACACTGAATTTCTGCAAGGTCGGACA
 ATGAGATGGGCCTTAGCTTGGAGTTTTATGATGATGTCACAGTACCATCACCACCAAGTAAAGCGAAGAA
 AATTAGAGAAACCGAGAAAACCCATAACATTCGTGGTGTGGCGTCCGTGATGAAGGAATTATCCCTCAA
 AGCATCACCTCTGCGCTCGGAGACGGCGGAAGGCATAGTCGTTGTCACGACATGGATTGAAAAAATCTC
 ACTGATTTGAAGGTCCAGCATAAACGAGTTCCTGTGAAAAGAGGAAGTCAAGCTTTTCTAACGGCCA
 TAGAAAACCTCCTGGATTCATTTAAGGAGAAAAGAGAGAGCGTGTGAGACAGCTGAGAGAAGTTCCCCG
 AGCTCCTGAGGACGTATTTCAGGCCTTGGAAGAGAAAAGCCACCCCAAGAGTCTGGCAATAGCCAA
 GAACTGGCCAGGGGCCCCAGGAGAGGACCCCTGTGGGCTGCTCTGCGGGAAGGCGAGGCTGCCGCTG
 TGGAGGGCCCGTCCCGAGCCAGGAGTCCCTGTCCAGGAGGAAAACCCGGAACCCACGGAGGATGAAAAG
 GAGTGAGGAAAAGGGAGGGTGGAGTTTTGAAAATTGTCAAGGCTCTAGCAACGGAGCCAGGACCAA
 GAGGCTTCTGAGCAGTTCGGCAGCCAGTGGCTGAAAGGGGAAACGTCTCCAGGAGTGGCCGGACAGT
 ACCTGTTAAGTGTGATAAACGTTAAGAAGGAGGTGGACGATGCCTTAGTGGAGATGCACTGGGTTGA
 GGGCCAGAACAGGATCTGATGAACCAGCTTGCACCTACATACGTAACCAAATTTTCAGGCTTGTGCA
 GTTAAC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG208648 representing NM_024086
 Red=Cloning site Green=Tags(s)

MALSKSMHARNRYKDKPPDFAYLASKYPDFKQHVQINLNGRVSLNFKDPEAVRALTCTLLREDFGLSIDI
 PLERLIPTVPLRLNYIHWVEDLIGHQSDSKSLRRGIDIGTGASCIYPLLGATLNGWYFLATEVDDMCFN
 YAKKNVEQNNLSDLIKVVKVPQKTLMDALKEESEIIYDFCMCNPPFFANQLEAKGVNSRNP RPSSV
 NTGGITEIMAEGGELEFVKRIIHDSLQLKKRLRWYSCMLGKKCSLAPLKEELRIQGVPKVITYTEFCQGR
 MRWALAWSFYDDVTPSPSKRRKLEKPRKPIFVVLASVMKELSLKASPLRSETAEGIVVTTWIEKIL
 TDLKVQHKRVPCGKEEVSFLTAIENSWIHLRRKKRERVRQLREVPRAPEDVIQALEEKPTPKESGNSQ
 ELARGPQERTPCGPALREGEAAAVEGPCPSQESLSQEENPEPTEDERSEEKGGVEVLENCQSSNGAQDQ
 EASEQFGSPVAERGRKLPVAGQYLFKCLINVKKEVDDALVEMHWVEGQNRDLMNQLCTYIRNQIFRLVA
 VN

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_024086

ORF Size: 1686 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_024086.3](#), [NP_076991.3](#)

RefSeq Size: 5758 bp

RefSeq ORF: 1689 bp

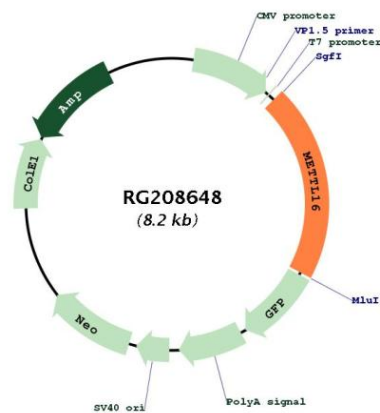
Locus ID: 79066

UniProt ID: [Q86W50](#)

Cytogenetics: 17p13.3

Gene Summary:

RNA N6-methyltransferase that methylates adenosine residues at the N(6) position of a subset of RNAs and is involved in S-adenosyl-L-methionine homeostasis by regulating expression of MAT2A transcripts (PubMed:28525753, PubMed:30197299, PubMed:30197297). Able to N6-methylate a subset of mRNAs and U6 small nuclear RNAs (U6 snRNAs) (PubMed:28525753). In contrast to the METTL3-METTL14 heterodimer, only able to methylate a limited number of RNAs: requires both a 5'UACAGAGAA-3' nonamer sequence and a specific RNA structure (PubMed:28525753, PubMed:30197299, PubMed:30197297). Plays a key role in S-adenosyl-L-methionine homeostasis by mediating N6-methylation of MAT2A mRNAs, altering splicing and/or stability of MAT2A transcripts: in presence of S-adenosyl-L-methionine, binds the 3' UTR region of MAT2A mRNA and specifically N6-methylates the first hairpin of MAT2A mRNA, impairing MAT2A expression (PubMed:28525753). In S-adenosyl-L-methionine-limiting conditions, binds the 3' UTR region of MAT2A mRNA but stalls due to the lack of a methyl donor, preventing N6-methylation and promoting expression of MAT2A (PubMed:28525753). In addition to mRNAs, also able to mediate N6-methylation of U6 small nuclear RNA (U6 snRNA): specifically N6-methylates adenine in position 43 of U6 snRNAs (PubMed:28525753, PubMed:29051200). Also able to bind various lncRNAs (PubMed:29051200). Specifically binds the 3'-end of the MALAT1 long non-coding RNA (PubMed:27872311).[UniProtKB/Swiss-Prot Function]

Product images:

Circular map for RG208648